



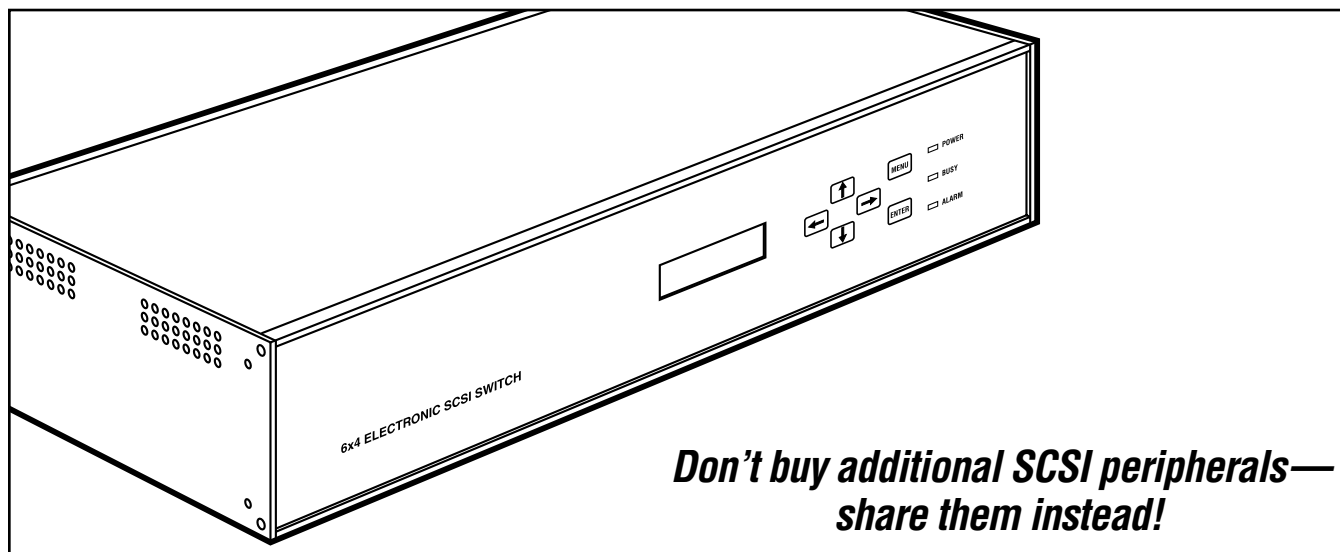
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Black Box Corporation.

BLACK BOX[®]

NETWORK SERVICES

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SCSI MATRIX AND SCSI ELECTRONIC SWITCHES



Key Features

- ▶ **Connect any SCSI bus on one side of the switch to any SCSI bus on the other side.**
- ▶ **Transparent switching.**
- ▶ **No SCSI ID required.**
- ▶ **Monitor and manage via LCD menus, ASCII commands, or GUI control software.**
- ▶ **Support up to 32, 40, or even 60 peripherals!**
- ▶ **Daisychain via serial ports for centralized control.**
- ▶ **Most units are rackmountable.**

SCSI I/O devices are useful, often powerful, and have some of the best available data-transfer rates. But they can be expensive, too. And some of them, such as tape drives and scanners, are only used occasionally. Rather than buying one for each user, share them.

Our SCSI switches come in several varieties that can switch between different numbers of SCSI buses. Choose from 2 x 2 or 4 x 2 Matrix Switches and 6 x 4 Electronic Switches.

These crosspoint switches are transparent to your system operation. That means they can connect any bus on one "side" of the switch to any bus on the other side, with no delay and no need for a SCSI ID.

You can use LCD-panel menus, push buttons, and LEDs to do monitoring and management

from a switch's front panel.

Menus serve a wide variety of functions. They can be used to switch or terminate SCSI ports, display SCSI port status, enable or disable daisy chaining, number the switches in a daisy chain, display the internal temperature, set a maximum temperature limit, lock or unlock the front panel, and display the firmware version.

However, you'll probably find it more convenient to manage a switch remotely by attaching it to your LAN or to an administration computer's serial port. (The switches include a serial cable and adapter for this purpose.) From an admin computer, you can send ASCII commands that duplicate all of a switch's LCD menu functions. Plus you can send commands to set or report alarm conditions, to report port performance, to yank on the SCSI

reset line, or to lock or unlock the computer's serial port.

For complete convenience and management, all SCSI Matrix and Electronic Switches include a CD-ROM of Windows[®] based GUI control software that makes your job even easier. You can replace the ASCII commands with simple radio buttons and checkboxes!

The 2 x 2 Matrix Switches support up to 32 peripherals. If you think that's a lot, check out the 6 x 4 Electronic Switches—they support up to 42 peripherals. And the 4 x 2 Matrix Switches support as many as 60 peripherals! All models can be daisy chained through their serial ports for larger or more complex installations, or just for more centralized control. LCD-panel menus also set the serial ports' data rate at 9600 bps or 19.2 kbps.

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The 2 x 2 Matrix Switches are designed for desktop use only, but the 4 x 2 Matrix Switches and 6 x 4 Electronic Switches come with adhesive feet (if you want to place them on a desk or another flat surface) and rackmount hardware (if you want to mount them in a standard 19" equipment rack).

2 x 2 SCSI Matrix Switches

Two units are available.

Choose the model you need to support Single-Ended Narrow and Wide SCSI or Differential Narrow and Wide SCSI.

Both units switch connections between four independent SCSI buses. Electronic switching is transparent to SCSI controllers and peripherals, and the switches require no SCSI ID.

4 x 2 SCSI Matrix Switches

Two units are available that support Single-Ended Narrow and Wide SCSI or Differential Narrow and Wide SCSI.

By using a switch and its electronic switching circuits, you can electrically make or break connections between groups of four and two independent SCSI buses.

As with the 2 x 2 switches, all switching is transparent and no SCSI ID is required for the units. You can daisychain up to 60 4 x 2 SCSI Matrix Switches (SC122A-R2, SC123A) and control them all by one serial port.

6 x 4 Electronic SCSI Switches

Two units are available that support either Differential Narrow and Wide SCSI or Single-Ended Narrow and Wide SCSI.

By using a switch and its electronic switching circuits, you can electrically make or break connections between groups of six and four independent SCSI buses.

Up to 42 of these switches can be daisychained together and controlled via one serial port. All switching is transparent and no SCSI ID is required.

Specifications

Cabling Distance (Maximum):

SC120A-R2, SC122A-R2,
SW487A-R2: Single-Ended:
6 m (19.7 ft.); LVD: 25 m (82 ft.);
Serial: 15 m (49.2 ft.);
SC121A, SC123A, SW485A:
HVD: 25 m (82 ft.)

Data Format: Serial: No parity,
8 bits, 1 stop bit (fixed)

Port Switching Delay (Maximum):
3 ns

Protocol: All: Asynchronous and
synchronous compatible;
SC120A-R2, SC122A-R2,
SW487A-R2: TCP/IP
compatible

SCSI Bus Termination:

Single-Ended and LVD:
Active internal;
Differential: Passive internal

SCSI Compatibility: SC120A-R2,
SC121A, SC122A-R2,
SC123A, SW485A, SW487A-R2:
SCSI-1, SCSI-2, SCSI-3;
SC120A-R2, SC122A-R2,
SW487A-R2: Also compatible
with Ultra160 SCSI (Ultra3
SCSI)

Signal Skew (Maximum): 2 ns

Speed (Maximum):

All: Serial: 9600 bps or 19.2 kbps;
SC120A-R2, SC121A, SC122A-R2,
SC123A: LAN: 10 Mbps;
SC120A-R2, SC122A-R2,
SW487A-R2:
Single-Ended:
8-bit Narrow: 20 MBps;
16-bit Wide: 40 MBps;
Differential:
8-bit Narrow: 40 MBps
for Ultra2 SCSI
(Narrow transfers
aren't officially
supported in the
Ultra160 SCSI
standard);
16-bit Wide: 160 MBps;
SC121A, SC123A, SW485A:
8-bit Narrow: 40 MBps;
16-bit Wide: 80 MBps

Interface: SC120A-R2, SC122A-R2,
SW487A-R2: Single-Ended
Narrow and Wide SCSI;
SC121A, SC123A, SW485A:
Differential Narrow and Wide
SCSI

Connectors:

SC121A: SCSI: (6) 68-pin HD F;
LAN: (1) RJ-45; Serial: (1) DB9 F;
SC123A: SCSI: (8) 68-pin HD F;
LAN: (1) RJ-45; Serial: (1) DB9 F;
SW485A: SCSI: (14) 68-pin HD F;
LAN: (1) RJ-45; Serial: (1) DB9 F;
SC120A-R2, SC122A-R2,
SW487A-R2:
SCSI: SC120A-R2:
(6) 68-pin HD F;
SC122A-R2:
(8) 68-pin HD F;
SW487A-R2:
(14) 68-pin HD F;
LAN: (1) RJ-45;
Serial: (1) DB9 M, (1) DB9 F

Operating Environment:

Temperature: 32 to 149°F
(0 to 65°C);
Humidity: Up to 90%
noncondensing

Power: SC120A-R2, SC121A:
95 to 260 VAC, 48 to 65 Hz,
autosensing;
SC122A-R2, SC123A:
105 to 240 VAC, 48 to 65 Hz,
autosensing;
SW485A, SW487A-R2:
105 to 240 VAC, 50 to 60 Hz,
autosensing

Size:

SC120A-R2, SC121A, SC122A-R2,
SC123A: 4.5"H x 11.3"W x 9.7"D
(11.4 x 28.7 x 24.6 cm);
SW485A, SW487A-R2:
3.5"H x 16.8"W x 12"D
(8.9 x 42.7 x 30.5 cm)

Weight: 5 lb. (2.3 kg)

Ordering Information

ITEM

CODE

2 x 2 SCSI Matrix Switches

Single-Ended Narrow and Wide, 68-Pin LVD.....SC120A-R2

Differential Narrow and Wide, 68-Pin HVDSC121A

4 x 2 SCSI Matrix Switches

Single-Ended Narrow and Wide, 68-Pin LVD.....SC122A-R2

Differential Narrow and Wide, 68-Pin HVDSC123A

6 x 4 Electronic SCSI Switches

Differential Narrow and Wide, 68-Pin HVD.....SW485A

Single-Ended Narrow and Wide, 68-Pin LVDSW487A-R2

You might also need the following SCSI Cables...

Micro D68 Male-to-Male—for Attaching Ultra2 SCSI Devices (Data Rates up to 80 MBps)

3-ft. (0.9-m)EVMS25-0003-MM

6-ft. (1.8-m)EVMS25-0006-MM

Micro D68 Male to VHDCI 68-Pin Male—for Attaching Ultra2 SCSI Devices

3-ft. (0.9-m)EVMS26-0003-MM

6-ft. (1.8-m)EVMS26-0006-MM

Micro D68 Male-to-Male—for Attaching SCSI-3 Devices (Data Rates No Higher Than 40 MBps)

3-ft. (0.9-m).....EVNSC07-0003-MM

6-ft. (1.8-m).....EVNSC07-0006-MM

Micro D68 Male to Micro D50 Male—for Attaching SCSI-3 Devices

3-ft. (0.9-m).....EVMS8-0003-MM

6-ft. (1.8-m).....EVMS8-0006-MM

Micro D68 Male to Micro D50 Male—for Attaching SCSI-2 Devices (Data Rates No Higher Than 20 MBps)

5-ft. (1.5-m)EVMS4-0005

If you'd like to attach Ultra160 SCSI devices (data rates up to 160 MBps), please call Black Box Tech Support.

We might be able to give you a quote on the cables you'll need.

You might also need...

SCSI Fiber Optic Extenders (with High-Density 68-Pin Connectors)

Low-Voltage Differential (LVD)IC490A

Differential (HVD).....IC508A

CAT5 UTP for 10BASE-T (24 AWG Stranded, 4-Pair, PVC)

Unterminated Bulk Cable, 250-ft. (76.2-m)EVNSL05A-0250

Terminated Patch Cable (RJ-45 Male-to-Male, TIA-568B, Straight-Pinned—Specify Length).....EVMSL05

Data-Line Surge Protectors

10BASE-T (RJ-45 Female-to-Male)SP512A-R3

RS-232 (DB9 Male-to-Female)SP361A-R2

Call Black Box Tech Support for help determining your best options for AC power protection.